REMARKS

Initially, Applicants would like to express appreciation to the Examiner for taking the time to discuss this case with Applicants' attorney on August 23rd, 2006. The amendments made by this paper are consistent with the proposals discussed during the interview.[1]

The Office Action mailed July 26, 2006 considered claims 1-19. Claims 1-19 are rejected under 35 U.S.C. 101 because the claimed invention is directed to non-statutory subject matter. Claims 1-19 are rejected under 35 U.S.C. 103(a) as being unpatentable over Muhlestein et al. (US 6,996,809) hereinafter *Muhlestein* in view of "How Debuggers Work", by Jonathan B. Rosenberg hereinafter *Rosenberg*.[2]

By this paper, claims 1, 11, 13, 15-16, 18 and 19 have been amended and new claims 20-23 have been added, such that claims 1-23 remain pending for reconsideration.[3] The remaining independent claims at issue include claims 1 and 19, with claim 1 being directed to a method and claim 19 being directed to a corresponding system configured for implementing the method of claim 1.[4]

As discussed during the interview, the claims are generally directed towards embodiments for using a mirror code process to analyze a managed code process. The method recited in claim 1, for example, includes performing dual compilation of source code into managed code and mirror code. The method also recites how a managed code process is run in a runtime environment that writes to and reads from a first address space while running how a mirror code process is run with the mirror code to a second address space that does not overlap the first address space. Cross-process memory access is also used by the mirror code process, running within the mirror code process, to read from at least a portion of the first address space and write at least a portion of the contents of the first address space into the corresponding location in the second address space. Then, debugger access is used in the second address space to analyze the runtime execution of the managed code process.

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[1] Some additional amendments have been made by this paper in addition to the amendments discussed during the interview to further promote consistency and clarity of the claim language.

[2] Although the prior art status of the cited art is not being challenged at this time, Applicant reserves the right to challenge the prior art status of the cited art at any appropriate time, should it arise. Accordingly, any arguments and amendments made herein should not be construed as acquiescing to any prior art status of the cited art.

[3] The claim amendments and new claims are generally supported by the disclosure found in the specification, as referenced and reviewed during the interview, including the disclosure corresponding to [¶2, ¶40, ¶42-¶43, ¶58, ¶62-¶67 & ¶69-¶71].

[4] Claims 8-10 12 and 14 are also directed to computer-program product claims configured for implementing the methods recited in claims 1, 2, 7, 11 and 13, respectively.

As described and agreed to during the interview, the foregoing claimed embodiments do not appear to be anticipated by nor made obvious in view of the cited art of record. In particular, *Muhlestein* and *Rosenberg* fail to teach or suggest any embodiment in which a second address space is created and used by a mirror code process in response to dual compilation of source code that produces both managed code and mirror code and such that the debug access can be performed on the second address space associated with the mirror code rather than on the first address space associated with the managed code, as claimed.

Instead, *Rosenberg* appears to teach the use of tables and pointers into the 1st address space which are observed and manipulated for the purpose of debugging and without creating or using a 2nd mirror image of the process or data storage for the debugging. See for example, page 81.

Muhlestein, on the other hand, does disclose a managed code environment but only in the context of providing access to data instrumentation data from applications executing in the managed code environment to an instrumentation data source such as WMI (which currently only runs in native code)(see Col. 2, ll. 40-63 and Col. 3, ll. 7-12. *Muhlestein* performs its functionality through the use of a novel "decoupled provider" that operates as an intermediary between the managed code environment and the instrumentation data source and which converts and provides the information that is necessary. (See Col. 3, ll. 36-59 and Col. 4, ll. 14-18).

As further discussed during the interview, *Muhlestein* and *Rosenberg* also fail to teach or suggest any embodiment in which the managed code process is run on a remote computing system that utilizes a different native language than a primary computing system used to run the managed code process, as recited in claim 20, or wherein pointers are padded to account for differences in pointer size requirements of different platforms used by the primary and remote computing systems, as recited in claim 21, or wherein only some of the data structures generated during running of the managed code process are replicated during running of the mirror code process, as recited in claim 23.

Finally, it will be noted that the rejections under §101 are moot in view of the fact that the claims do clearly recite embodiments that provide useful, concrete and tangible results. There is also a physical transformation of data by providing both the managed code and the mirror code from the dual compilation and enables the debugging access to be performed on the
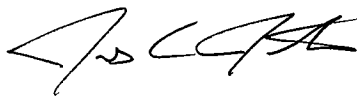
second address space. For at least this reason and the other reasons discussed during the interview, the claims are directed to statutory subject matter.

Applicants also respectfully submit that the pending claims (as recited in the independent claims, for example) are distinguished from the cited art and that the other rejections to the claims are now moot and do not, therefore, need to be addressed individually at this time in view of the foregoing remarks, as well as those presented during the interview. It will be appreciated, however, that this should not be construed as Applicants acquiescing to any of the purported teachings or assertions made in the last action regarding the cited art or the pending application, including any official notice. Instead, Applicants reserve the right to challenge any of the purported teachings or assertions made in the last action at any appropriate time in the future, should the need arise. Furthermore, to the extent that the Examiner has relied on any Official Notice, explicitly or implicitly, Applicants specifically request that the Examiner provide references supporting the teachings officially noticed, as well as the required motivation or suggestion to combine the relied upon notice with the other art of record.

In the event that the Examiner finds remaining impediment to a prompt allowance of this application that may be clarified through a telephone interview, the Examiner is requested to contact the undersigned attorney.

Dated this 30th day of August, 2006.

Respectfully submitted,

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